Amendments to the Specification:

Please replace the "Cross-Reference to Related Applications" with the following amended "Cross-Reference to Related Applications":

This application is a continuation-in-part and claims benefit to pending U.S. patent application Serial No. 09/388,253 filed September 1, 1999 now U.S. Patent 6,386,018 entitled "Ultrasonic [[2]]two-Phase Flow Apparatus and Stratified Level Detector."

Please replace paragraph [0008] with the following amended paragraph:

[0008] Given the cross-section measurements of the meter carrying the gas, the average velocity over the area of the gas may be used to find the quantity of gas flowing through spoolpiece 100. Typically, these measurements are based on a batch of ~~10-30~~ ten to thirty ultrasonic signals rather than upon only one upstream and downstream signal. Alternately, a meter may be designed to attach to a pipeline section by, for example, hot tapping, so that the pipeline dimensions instead of spoolpiece dimensions are used to determine the average velocity of the flowing gas.

Please replace paragraphs [0031], [0032] and [0033] with the following amended paragraphs:

[0031] Figure 2 includes the end-view of a pipeline or spoolpiece 2000 for a multiple transducer level detector. As used herein, the term pipeline shall refer to either an actual pipeline or to a spoolpiece. Three chords 2010, 2020, 2030 (corresponding to a multi-path ultrasonic meter) are shown and are labeled as chords A, B, and C. Path D, labeled 2040, is also shown and corresponds to an additional, vertical chord. Of course, path D includes an upstream transducer and a downstream transducer. The transducers corresponding to path D may be positioned somewhere other than true vertical, so long as the length of path D changes with changes in stratified fluid. Chord D therefore may be the fourth chord of a four-chord ultrasonic meter, or may be used separately but in conjunction with an ultrasonic flow meter (or other device to measure the speed of sound in the gas) to establish the amount of stratified flow. Use of a four-chord ultrasonic meter is exemplary only and the disclosed multiple transducer level detector could be used with or be part of any multiple chord ultrasonic meter, including a meter having

bounce paths. Nonetheless, use of a three horizontal chord design in conjunction with the disclosed level detector (or integrating the design into a four-chord meter) has certain advantages over the use of a traditional four horizontal-chord design. For example, the lowest chord on the [[4]] four chordal path meter is easily flooded in stratified flow. An ultrasonic meter having three horizontal chords does not have this lowest chord, and thus avoids this problem. As already stated, the ultrasonic transducers corresponding to path D can be either separate from, or as a part of, such an ultrasonic meter. For these purposes, a level detector and an ultrasonic meter are thought of as two different devices that operate together to achieve a synergistic effect, but in actuality these two devices may equally be part of the same device and share components such as electronics, etc.

[0032] Figure 3 shows the pipeline 2000 from a top perspective and identifies a direction of flow, as well as chords A, B, and C. Figure 4 includes a side view of pipeline 2000 when the pipeline does not contain a stratified [[2]]two-phase flow. Path D originates at point 2210 corresponding to an ultrasonic transducer 2215, reflects off of the bottom 2230 of pipeline 2000 and travels to point 2220 corresponding to ultrasonic transducer 2225. The transducers 2215 and 2225 are preferably angled at about [[60]]sixty degrees, although this is not a requirement of the invention. During operation transducers 2215 and 2225 preferably each generate ultrasonic signals that travel along path D and are detected by the other transducer, resulting in both an upstream and a downstream measurement. The measurement of both the upstream and downstream times of flight yields a speed of sound measurement for chord D.

[0033] Figure 5 shows a side view of a pipeline 2000 containing a stratified flow 2310 of depth "h". In a pipeline, the area of the pipeline occupied by stratified flow will typically not exceed 10%. Pipeline 2000 includes ultrasonic transducers 2215 and 2225 that generate ultrasonic signals that travel along a first path D 2041. ~~First D path~~ First path D 2041 corresponds to a pipeline without stratified flow as shown in Figure [[6]]4. Second path D 2042, corresponding to a pipeline with a stratified flow, also is shown. Second path D 2042 corresponds to an ultrasonic signal that reflects off the surface 2320 of stratified flow 2310. In addition, it can be seen that second path D 2042 is slightly shorter than first path D 2041. In particular, the second path D

2042 will be slightly shorter than the first path D 2041 depending upon the level of the stratified flow.

Please add the following new paragraph after paragraph [0041]:

[0041.1] Figure 9 is a top view of a horizontal chord. Ultrasonic meter 800 includes upstream transducer 825 and downstream transducer 835, each attached to spoolpiece 805. Piezoelectric element 820 houses within transducer 825 while piezoelectric element 830 houses within transducer 835. Transducers 825, 835 also define chord 810. Fluid flows through transducer 800 in direction 850.

Please replace the Abstract on page 18 with the following amended Abstract:

An apparatus and related method for measuring the presence or degree of stratified flow in a two-phase flow is disclosed. A first speed of sound for the fluid flowing through the pipeline is measured for an ultrasonic signal that would reflect from stratified flow, if present. A second speed of sound is measured at a location that would not reflect off the stratified flow. A difference in these two measurements indicates the presence of stratified flow. The level of stratified flow can be determined based on the magnitude of the difference. ~~Because this method is so sensitive to changes in the amount of stratified flow, it is more reliable than previously known methods.~~